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Market Collaboration: Finance, Culture, and Ethnography after Neoliberalism

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RESEARCH ARTICLES

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ABSTRACT In the wake of the disasters of March 2011, financial regulators and financial-risk management experts in Japan expressed little hope that much could be done nor did they take great interest in defining possible policy interventions. This curious response to regulatory crisis coincided with a new fascination with culturalist explanations of financial markets, on the one hand, and a resort to what I term "data politics"—a politics of intensified data collection—on the other. In this article, I analyze these developments as being exemplary of a new regulatory moment characterized by a loss of faith in both free market regulation and state-led planning, as well as in expert tools. I consider what might be the contribution of the anthropology of financial markets and ultimately argue for what I term a "collaborative economy" as a way to retool both financial and anthropological expertise. [*too big to fail, risk, debt, finance, collaboration, Japan*]

概要 2011年3月の震災を受けて、日本の金融規制当局や金融リスク管理の専門家は、打つ手は限られているという見方を示し、政策的介入の可能性の提案についても、あまり強い関心を示さなかった。規制における危機に対するこうした興味深い反応は、一方では金融市場に関する文化的理解に対する新たな関心の高まりと、もう一方では本稿で「データ政治 (data politics)」と呼ぶ、集中的なデータ収集をめぐる政治への流れと、重なる側面がある。こうした展開は、規制の新しい形の典型例であり、その背景には、自由市場における規制や国家主導の政策に対する失望感や、専門家の技術に対する諦めがある。本稿は、金融市場に関する文化人類学的研究がもたらす貢献について考察し、本稿で「共同経済 (collaborative economy)」と呼ぶ新しい経済の形を通して、金融および文化人類学の双方における専門知識の再編を提唱する。[「大きすぎてつぶせない」、リスク、債権、金融、コラボレーション、日本]

RESUMEN Tras los desastres de marzo del 2011, reguladores financieros y expertos en manejo de riesgos financieros en Japón expresaron poca esperanza de que algo pudiera hacerse, y tampoco tomaron gran interés en definir posible intervenciones en términos de política. Esta curiosa respuesta a una crisis regulatoria coincidió por una lado, con una nueva fascinación con explicaciones culturalistas de los mercados financieros, y por otra, con el recurrir a lo que llamo "política de información"— una política de intensificada colección de datos. En este artículo, analizo estos desarrollos como ilustrativos de un nuevo momento regulatorio caracterizado por una pérdida de fe tanto en la regulación del libre mercado y la planeación liderada por el estado como en las herramientas del experto. Considero cuál puede ser la contribución de la antropología de los mercados financieros, y últimamente argumento a favor de lo que llamo "economía colaborativa" como una manera de reequipar tanto el conocimiento financiero como antropológico. [*excesivamente grande para fallar, riesgo, deuda, finanzas, colaboración, Japón*]

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NO ENERGY

May 2011, Tokyo. It is only a few weeks after a massive earthquake and tsunami left thousands dead and many more thousands homeless; reduced factories, roads, train lines, and other crucial aspects of the national economic infrastructure to rubble; and unleashed the worst nuclear crisis since Chernobyl. I sit alone in my cubicle on the floor reserved for foreign researchers at the Bank of Japan, Japan's central bank; the foreign economists who usually occupy this floor have returned home to escape the radiation. It is pitch dark everywhere beyond the immediate vicinity of my desk, and the temperature is over 80 degrees, owing to the government's mandate that every corporation and government agency must cut 15 percent of its power usage to compensate for the outage of Fukushima.

My "assistant" monitors my every move—she checks my computer regularly, requests a report on each conversation with bank and nonbank employees, and follows up to find out exactly what was discussed even in the case of meetings with personal friends. Every day at 12:30, the entire team crowds into the only working elevator that remains after the others have been decommissioned to save power, and we head to the darkened employee cafeteria, where we are served vegetables from Fukushima province, which, according to official government proclamations, are entirely safe.

At these lunches, people keep their eyes down and eat quickly. Occasionally they crack a half-joke about government policy. I am repeatedly lectured on the failures of United States free market ideology as evidenced by the financial crisis of 2008 in ways that oddly replay Occupy Wall Street themes—the traders' bonuses, the income gap between rich and poor, the politicians who are beholden to the banks, et cetera. When we do talk Japanese regulatory or fiscal policy, everyone insists again and again that there is "no hope" for the given situation—no way out of the current economic mess. The lights are never going back on again, I am told.

My assignment at the research division of the central bank, as announced by the confident and brilliant individual responsible for negotiating the bank's international agreements, was to conduct research on the "too big to fail" problem—the problem of what to do about corporations or financial institutions whose failure could destabilize one or more entire economies. My role as a researcher, arranged by a longtime informant who knew of my interest in supplementing a decade of interview-based ethnography with full-time research inside the central bank, was something of an experiment for both myself and my colleagues: the very fact that there might be a place for a lawyer and an anthropologist, and a question to be answered about "too big to fail," was in itself new. Before 2011, every one of my informants, to a person, had subscribed without question to the ideology of the self-correcting free market, unfettered by regulation. This ideology had animated their life work, their hopes for their personal futures, their response to practical problems large and small.

Yet by the early spring of 2011, something had changed fundamentally in much the same way that Slavoj Žižek (1993:234) describes the sudden but utterly fundamental and irreversible "collapse of the Big Other" in Romania in 1989 and Alexei Yurchak (2006) describes the moment at which "everything that was forever" in Russia suddenly "was no more." By the spring of 2011, few of my longtime friends seemed to recall, unless pressed into an embarrassing moment of mea culpa, that they once had subscribed to such a view. In what follows, I explore what this change of heart might tell us about the current political moment—that is, the moment after the collapse of pure faith in neoliberalism and its implications for the challenges and contributions of critical scholarship. Following Ulrich Beck (2009), Sheila Jasanoff (1986), and others, my way into the problem is through the question of the politicization of cultures of expertise in risk management (Miyazaki 2012). Since 2008, the expert management of risk has become a major site of political controversy. From "Occupy Wall Street" (Juris 2012; Nugent 2012; Razsa and Kurnik 2012) to "End the Fed" (Paul 2009), to take examples from the United States alone, once discrete cultures of expertise in risk management have become targets of new political movements on both ends of the political spectrum. I am interested in how political and epistemological crises surrounding expert knowledge generate new kinds of state–market arrangements and vice versa. But I am equally interested in the consequences of these developments for the expertise of the cultural critic as market collaborator.

Along with the loss of faith in market competition as the most efficient and just decision-making tool (Foucault 2010:118), there was also a loss of hope for the future—individual or collective. Conversation with young regulators about their own plans for their future career paths inevitably petered out with comments like, "I don't really know," or "I guess I will just stay here for a while," and conversation with colleagues about their hopes for their children's futures usually ended in resigned accounts of the lack of good jobs, the lack of options, the fact that their children's future was sure to be darker than their own had been. In the view of the regulators with whom I worked and my interlocutors in the financial markets alike, the best that one could aim for was to forestall an inevitable decline in the economy and in one's own life chances.

This turn of events, marked by an opening up of a new space for me as collaborator, also destabilized my critical faculties. The premise and the problem of my earlier ethnographic work had been the authority, efficacy, and legitimacy of the market—of the zone of the private as against the state over the last 20 years (Riles 2011a). One of the core themes of my work had been the question of how to respond to the Hayekian critique of state intervention in markets I had heard articulated so forcefully by private and public actors alike in the context of a time of widespread attack on the legitimacy of the regulatory state. The economist Friedrich Hayek, a veteran of totalitarianism who then championed democracy grounded in a market unfettered by state intrusion, focused his criticism of market regulation on questions of epistemology—on the inadequacy of the forms of knowledge available to state planning (Hayek 1952). By definition, he argued, state actors could not adequately know the market because by the time they gathered information about market conditions, it was already obsolete. Because their market knowledge was always retrospective, it was inherently contradictory to the prospective orientation of planning, and hence they could not intervene in the market effectively. The aggregate knowledge of private market participants, in contrast, could fully coordinate the market in real time through the collective wisdom embodied in the nature of price. Market-based governance, therefore, was more accurate and hence more efficacious.

Yet by the spring of 2011, it was clear that the political bargain that undergirded state–market relations had changed in important ways such that neither the political dangers that motivated Hayek's neoliberalism nor Hayek's economic prescriptions animated people's passions. In Japan, at least, the old hegemony of free markets unfettered by state intervention has been superseded by something very different.

I naively search for what I might do to help at a time of tremendous national suffering and need. Do they need research in English on comparable problems or assistance with letters or speeches for foreign consumption? Are there any new research or policy questions beyond or different from my agreed duties that demand immediate attention? "Any new questions . . . that is a good one. I guess we should come up with something," the leader of my team flashes a smile at a coworker, and I realize I have said something very out of step. Mostly, things continue on, as if we were not in the dark and the heat, and as if the radiation was not falling and the aftershocks were not shaking our building.

In the weeks that followed, my colleagues seemed to resist any sense of the extraordinary and energized crisis moment, in which we the policy makers might emerge as semiheroic subjects empowered and compelled to act on behalf of the nation. Instead, my colleagues seemed to live within a different time frame—one of a long, inevitable decline, of a failure of agency, of no hope in the long run.[1] The phrase repeated again and again was shouganai—there is nothing to be done.[2]

In my last week of research, I met the only exception I encountered this time, either in government or the market—a high-ranking official at the central bank. After securing a meeting space away from others' ears, he began by laying out his admittedly impressive credentials as a Thatcherite privatizer. It was he who had single-handedly dreamed up, and then executed, the privatization of Japan's postal service so reviled by the Left as an example of the dismantling of the state gone too far (Fukase and Tudor 2009). It was he who had overseen the creation of new financial regulatory institutions devoted to the UK model of so-called "light touch" market regulation with ex post facto laws. Now he wanted help with an ambitious new project, he explained breathlessly, to fundamentally change the nature of the Japanese people from passive, collectivist receivers of government authority into individual risk takers—all through the creation of new financial instruments that would encourage consumers and banks to take more risk.

This was the kind of project that once would have titillated many of my informants in both government and the private sector, and one offered by an individual who, at the time of my first research, was a lion, a towering figure among regulators. Now, however, my informants counseled me to keep my distance from this individual. His enduring free market views were out of favor, they told me. Nobody bought that kind of project anymore, and so he had been quietly kicked upstairs—shuffled over from a more important regulatory institution to a position in which it was hoped he could do less damage.

Yet I was less sure than my informants about which side to support. In the midst of the environmental and economic crisis of 2011, my colleagues' lack of motivation to try something—anything—a kind of personal and political apathy, a lack of energy—troubled me. Why, at this moment of what would seem to be the resurrection of the state, did regulators lack ambition, ideas, projects for saving the nation at a time of crisis, even a sense of crisis itself?[3] Why did this ethos of shouganai—of a disempowered, deflected, defeated subjectivity—pervade the bureaucracy? Why, at this moment of what would seem to be a rebirth of the regulatory state of exception (Agamben 2005; Schmitt 2005), did bureaucrats lack ambition, ideas, projects for saving the nation, even a sense of crisis itself? Why instead the temporality of no hope (Miyazaki 2009) and the inward turn toward a heightened monitoring of one another's performance of the very same mundane tasks that had framed state work in the time of free market ideology?

MARKET CULTURE

One of the interesting aspects of this moment of loss of faith in the neoliberal project was the newfound affinity my interlocutors perceived between their own task and mine, and hence between the practices of market regulation and the disciplinary orientation of anthropology. The word *culture* was on everyone's lips. Japanese markets were different "because the culture is different," I was told again and again, in a way that would have sent the same informants recoiling into counterclaims about the essentialistic arrogance and hegemonic orientation of culturalist explanations a few years earlier. This time, my informants projected a popularized version of familiar arguments in the social theory of financial markets concerning the many possible forms of capitalism and their cultural articulation (Comaroff and Comaroff 2000; Ong 2006; Vogel 1999; Žižek 2007).

This explicit turn to culture, and to an anthropological vision of markets, in the aftermath of a crisis of faith in the predictive and regulatory power of economics and law is now in itself a transnational phenomenon demanding its own critical account. One hears incessant accusations, sometimes bolstered by professional anthropologists, concerning the problematic "culture of Wall Street," and the imperative to address the "culture" problem has given rise to a new professional niche for anthropological consultants within financial institutions as well as funding opportunities for diagnostic social scientific research. Within regional and international organizations of financial regulators, likewise, the rise of so-called "New Governance" techniques for global regulatory coordination, which purposely retool anthropological and sociological insights into an enforcement regime in which states are "peer reviewed" and bureaucrats "named and shamed" rather than legally punished or fined, is yet another example of this turn away from law and economics and toward society and culture as a regulatory force (Draghi 2011; Riles 2013; Walter 2010). There is a new market for sociological and anthropological techniques for making sense of markets as cultural spaces.

The material that follows, therefore, is in essence an account of a failed collaboration along these lines—of a bold experiment on the part of my colleagues to produce a new account of the economy and of market differences that in the end failed to produce the results for which they might have hoped. Perhaps they just got the wrong anthropologist: I ultimately could not bring myself to produce the cultural account they might have found ideologically useful, or at least intellectually interesting. And perhaps I was wrong to resist: the new political and economic configuration I believe they hoped to enlist me in describing—crystallized in the concept of "too big to fail"—indeed raises profound political, policy, and ethical, not to mention intellectual, challenges. However, collaborations have long and often unintended half-lives beyond the temporality of the project, and hence as a first tack, I want to pursue, as an ethnographic thought experiment, some of the lines of argument that we might have taken up together, after the quake (Murakami 2003).

My assignment to study and write about the so-called "too big to fail" problem was indeed topical since it was and remains a central puzzle of current regulatory initiatives around the world. One of the widely accepted lessons of 2008 among experts has been that certain financial institutions are too big, or too complex and interconnected with the global economy, to be allowed to fail—and hence, for better or worse, governments must step in and bail them out (de Larosière 2009). But as transactors come to be recognized by the state and by other transactors as too big to fail, they come to have an increasingly explicit promise of support from the state. When what the state will actually do at moments of crisis is entirely known, corporations have less incentive to meet their obligations (Johnson and Kwak 2011). Hence, during the period of my fieldwork many large banks were jockeying to be designated "too big to fail" so that they could borrow more cheaply (because their creditors understood they would not be allowed to fail; see Cox and Larsen 2011).

As the human and economic costs of the nuclear accident began to become clear in the summer of 2011, however, "too big to fail" took on a particular valence in Japan. It had also become a euphemism among bureaucrats for Tokyo Electric Power Company (hereafter, TEPCO), the electric company that owned the Fukushima Daichi nuclear power plant and that was now in danger of bankruptcy if it proved to be responsible for the full damage caused by the nuclear crisis. What my colleagues wanted from me was an academically legitimate account of "too big to fail" as it looked to centrist elites in Tokyo at that time: TEPCO was indeed too big to fail; somehow or another, TEPCO would have to be saved, either by legal arguments clearing TEPCO from liability, by injections of taxpayer funds, or by securing concessions from bondholders and banks (Morita 2012).

Yet TEPCO was too big to fail in a different sense than, say, Lehman Brothers. First, was it really a private corporation? TEPCO's actions were so closely intertwined with government policy, its employees so connected to government officials, and its policies so collaboratively produced with government officials that most of my informants immediately found the category of "private" somehow problematic. Its mission—providing the power to every business, every residence, every factory in the once-sparkling city of Tokyo and providing the electricity that fueled Japan Inc., an industrial giant entirely lacking in natural energy resources—was such a public one that TEPCO was too big to fail in the way Japan itself was too big to fail, if indeed it was. Energy was the unstated but ubiquitous backbone of the economy, and the crucial collaborative task of the government and of TEPCO was to ensure its plentiful supply. It followed that the task of the resident anthropologist was to translate this difference in the possible character of the "too big to fail" problem to a North Atlantic audience in a way that might make North Atlantic policymakers engaged in international regulatory coordination aware of their own cultural biases, their tendency to take their own specific institutional configurations as natural universals.

The fact of this utter interdependence of fates—of each individual and enterprise, and of the market and state—was represented financially as follows: TEPCO was one of the largest issuers of corporate bonds purchased by other companies and banks at the direction of the government, and TEPCO itself as well as these companies and banks together held the vast majority of Japanese government bonds, such that TEPCO's failure would seriously hurt the economic interests of those to whom the Japanese state itself is so deeply indebted (Miyazaki in press; Tett 2011). The ownership structure is significant: neither private ownership nor collective ownership but, rather, an intractable web of mutual obligations.

One necessary discursive task, then, was to articulate what my interlocutors perceived as a different model than the "North Atlantic" one of how and why corporations become too big to fail—one that foregrounds the interrelation of the corporation and the state from the start and that begins from the standpoint of debt relations rather than capital relations and hence of the vulnerability of all to one another's potential failure. The anthropological contribution, therefore, might have been to show that an important shift is taking place from economic and political relations structured around markets for capital, regulated at the margins by states—intervening more or less from the sidelines depending on whether the particular state ideology tends more toward Keynes or toward Hayek—to debt economies in which states are no longer marginal figures but are principal actors.

The desire for an account of debt as the new economic paradigm is not at all uniquely Japanese. As the popular success of David Graeber's *Debt: The First 5,000 Years* (2011) suggests, the debt paradigm is now pervasive throughout the financial world. The rethinking of economies as founded on relations of debt rather than capital (and, in some cases, also on reciprocity, altruism, affect, and the like), as well as the return to earlier generations of foundational anthropological theories of debt economies for new inspiration, is now attracting considerable attention among anthropologists and social theorists as well (Dodd 2013; High 2012; Riles 2011b; Roitman 2004; Sawyer and Gomez 2008).

This vision of corporations and states as enmeshed in a web of debts (Graeber 2011; Roitman 2004; Sawyer and Gomez 2008) forces us to ask whether a market economy is at all the right description of the current economic situation (Riles 2011b). Indeed, when market transactors around the world complain that they are overwhelmed with bad debt, they mean something very familiar to anthropologists who study so-called debt economies—that is, that they are enmeshed in debt that only engenders further debts that can never truly be repaid. And in fact, this is precisely the advantage as well as the conundrum of "too big to fail": TEPCO's loans and bonds have such a low interest rate and such a distant repayment horizon that they are in practice debts in perpetuity. The sovereign's debts, too, have been exposed as beyond any possible horizon of repayment. The Japanese government's debt is exceedingly cheap (the effective interest rate is zero), and (unlike Greece or the United States, for example) it is held almost entirely by domestic banks, corporations, and individuals who are themselves indebted to the same debtor state (Benner 2011). Financial commentators have suggested that Japan probably in fact never intends to repay this debt and hence that this debt defies our "normal" understanding of financial debt as a costly, temporary rental of capital.

One point on which anthropologists, as experts in debt economies, might contribute to the rethinking of the current economic moment is in bringing into view a richer conception of accountability and legitimacy in conditions of debt (Strathern 2004:94–102). From a Hayekian point of view, this mutual entanglement of the state and the market is a grave political problem, as much as an economic one—it is the "road to serfdom," a step on the path to totalitarianism (Hayek 2007). And, indeed, today the deflated legitimacy of both the market and the state is born out of shared dystopic fates, in which each is guarantor of the other's bad debts. After the collapse of the distinction between public and private—between the market and the institutions that regulate it—engendered by this mutuality of debts, the state alone encompasses all other forms of governance; it alone has power and agency. Yet the anthropologist might respond to Hayek with the insights of Marcel Mauss (2000) that the compulsion toward reciprocity in exchange relations—the compulsion to create and continually rejuvenate relations based on debt and mutual obligation—is in fact the basis of all ethics and sociality, the source of our humanity, and what we can return to at points at which grand ideologies fail us. From the point of view of the gift, the reimagination of capitalist economies as debt economies engendered by this dystopic moment would seem to open up a space for a different kind of politics and ethics of the transaction.

Yet should we accept this mission? How alternative is this alternative to capitalism? Does the very desire for the alternative among regulators and traders not suggest that the turn to capitalism's "outside" in some sense holds out the promise to re-energize the inside? Let's linger on this question for a moment while I turn to another aspect of the political moment.

DATA POLITICS

My experience of being the target of surveillance was in no way unique; rather, it turned out to be one of the most salient, widely shared, and quotidian dimensions of daily life for those working in the government as well as those working inside the regulated banks. One legal compliance expert for a large Japanese bank described how, in the last several years, the number of government inspections, requests for information, and requests for documentation and telephone inquiries had increased so much that more than half his time was now devoted simply to complying with daily, weekly, quarterly, and yearly government requests for information. His exhausted frustration was targeted in particular at the "arrogant" tone of these government officials: "You can't refuse. When they make a demand, even one outside their authority, you don't even want to be the last one [among the big banks] to comply. If you are slow, they punish you ruthlessly. They have all the power. They are shoguns and we are just common people."[4]

And, indeed, some bureaucrats confirmed this description of a new informational politics. According to one central banker, the regulators ultimately had all the power they needed because the Japanese corporation, as a subject of regulation, was entitled to no "business privacy"—regulators had access to all the information about all the economic activity, all the time. They could and did monitor both sides of every trade.

Whether, or to what extent, central bank officials actually had anything close to full information is not a question I aim to answer. What is politically significant is that it was now the ambition of some regulators to have total information in real time. Banking regulation as implemented by the bureaucracy in Japan affords a wider latitude for regulators to inspect and make demands for information than in the

United States or in Europe. But in the past my interlocutors often saw this authority as somewhat problematic—evidence that they were still stuck in a developmental state moment and had not fully embraced a more advanced neoliberal approach.

The new emphasis on constant, total surveillance—"no business privacy"—was jarring to me from the point of view of the world of regulators I described in *Collateral Knowledge* (Riles 2011a) in which the regulator's dream was to withdraw from the market altogether and bring the Hayekian vision of the rule of law to full fruition. My interlocutors' vision of market regulation was now a darker one in which private actors had to be monitored all the time. Indeed, in the spring of 2011, I often heard high-ranking regulators say—in a way eerily evocative of leftist postcrisis arguments—that the only way to make large profits in the financial markets was to cheat and, hence, that the job of regulators was to manage the market imbalances—first, by catching this bad behavior as soon as it happened and, second, by spreading the costs and benefits of capitalism around, reallocating the fates of winners and losers toward some kind of equilibrium.

This turn to surveillance as an explicit modality of governance is not at all uniquely Japanese; it also has been recognized by social critics in Europe and the United States as indicative of a moment in which neoliberalism "appears to be in retreat, giving way to a darker vision of society harnessed to the valorization of policing as the primary mechanism of governance" (Hyatt 2012:209; cf. Wolin 2010). And as emerging social criticism of companies from Google to Facebook suggests, this modality of governance is not the purview of the state alone.

Yet what was interesting was not simply the quantity of information but the tools by which it was obtained. The first of these was massive computerized nets for day-to-day, transaction-by-transaction, data collection. One of the sources of central banks' authority was the fact that interbank transactions clear through accounts at the central bank. This clearing mechanism was a source of data—complete data, not samples or estimates—about market activity. These data were collected collaterally to the work of clearing but had value, authority, and a source of power all their own (Maurer 2012).

A second method of surveillance was what Douglas Holmes and George Marcus have described as the "paraethnographic method" (Holmes and Marcus 2005). Regulators of different ages and ranks were assigned to engage their counterparts at the major banks—they called them daily, visited them weekly or biweekly, built relationships, immersed themselves in the detail, made it their business to know everything big and small before it even "happened" as a market event. For Holmes's interlocutors engaged in designing monetary policy, paraethnography served as a supplement to macroeconomic modeling, a way to understand the general state of the economy as a whole. For the regulatory experts with whom I worked, paraethnography served rather as an alternative to law, a way to understand what individual market participants were up to—either to anticipate and resolve problems or to catch and stop bad behavior.

In such conditions, traditional lines of criticism seem somewhat out of step; there is little "archaeology" left for critics of capitalism to do. Foucauldian critiques of seemingly innocuous surveillance regimes (Foucault 1979) proved effective enough when the target was the neoliberal state, which claimed to withdraw, passively and even-handedly, from the market. But what happens when surveillance is no longer hidden but explicit, accepted by the targets, and even applauded by left-leaning interest groups as evidence of the state finally doing its job and keeping tabs on financiers? As one centrist law professor put it to me: "What's so bad about monitoring?" The politics is no longer subterranean but on the surface for all to see and, indeed, has already been accepted as just the way things are and should be done.

Perhaps, then, the conversation with my collaborators might have turned to what anthropologists know about debt economies: Mauss and many others after him have shown that what makes debt relations ethical is that they are relations of two sides—two sides that recognize one another's autonomy and dignity (Mauss 2000:111). As Marilyn Strathern (1988) has argued, in gift exchange (ironically, we might add, as in liberal capitalism), the Other (the exchange partner) is opaque—you don't go asking where the gifts you received or the commodities you procured in the market come from or what divisions or politics lay behind them (although you could and might at other moments not of transaction but of critique). In that sense, that Other becomes legitimate in precisely the way in which the corporation's legal personhood was until recently deemed legitimate—the legal fiction of corporate personality stands for the fact that the state will not "pierce the corporate veil" (Riles 2011b). Granting this kind of autonomy and legitimacy to another—a competitor, an exchange partner, an enemy—allows that other to be continually re-created, even rejuvenated, and this is why for anthropologists exchange is the basic human unit of ethics and sociality (Miyazaki 2010). The anthropological point about data politics might be, then, that it is not the current state of mutual indebtedness—the recent collective discovery that markets are not really markets but debt relations—that is the source of our political predicament as, ironically, critics on both the far right and the far left are now suggesting. The problem is rather the way we are going about being indebted to one another and, in particular, the way we lose our dignity when we lose our opacity—our (business or personal) privacy.

WHEN EXPERTISE FAILS

Yet here is why I could not follow through with this collaboration with financiers around cultural approaches to finance, alternatives to capitalism, and diverse cultures of capitalism and debt economies (e.g., Appadurai 2012): in debt economies, debts are highly calculable, rememberable, and liveable, and it is this calculability that engenders sociality. What made TEPCO too big to fail—and, indeed, what makes all cases of too big to fail so precarious—was precisely that the debts, the harms, the risks, were beyond calculation. The issue was not the move to debt but, rather, the move to a regime of incalculability.

Indeed, TEPCO's debts, incalculable yet real as they were, made visible the utter failure of the expertise of risk calculation: the legal discussion surrounding Fukushima centered on the question of who bore responsibility for a harm that expert knowledge said was so statistically improbable that it was in effect impossible—and yet had nonetheless already happened (Morita 2012).[5] In such a condition, it is not surprising that civil society groups on all sides of the political spectrum, the media, and even the experts themselves had lost faith in any "hierarchy of knowledge" (Beck 2009:33) premised on the "superiority of the expert" over ordinary ways of knowing.

I began to fear that to gloss this particular debt through the vocabulary of debt economies would constitute collaboration in the uglier sense of the term—something more attune to co-optation. In the end, therefore, I did not produce an account of cultures of indebtedness; I chose instead to write an oblique bureaucratic critique of the regulator's desire for culture in the form of a critical evaluation of the sociological turn in global financial governance (Riles 2013). Yet this ethnographic encounter demands more than simply accepting or refusing my informants' invitation to collaboration; it also demands a critical account of the cultural turn in finance itself.

For risk experts, the incalculability of risk is the hallmark of the failure of their expertise. The turn to big data—to gathering all the market information, rather than sampling or simulating or modeling, and to paraethnography as surveillance—is also a reflection of a loss of confidence in prior forms of expertise on which models, simulations, and samples are premised. The rise of "big data" as the new so-called "fourth paradigm" for research, heralded by information scientists as after and beyond earlier research paradigms of empiricism, theory, and simulation (Gray 2009), seems to be bursting with bravado.[6] But from another point of view, the idea that the experts would abdicate to the data control even over the hypothesis—would allow the hypothesis to emerge from the data rather than vice versa—is a profoundly humbling moment in the history of expertise.

Indeed, it is important to understand that the new surveillance of the excesses of the market was not paternalism—my interlocutors in the bureaucracy in the spring of 2011 were not claiming that they had the regulatory answers, could plan for the future, could do any better than market participants in salvaging the market (Wapshott 2012:193–195). Such a faith in the epistemology of "the plan"—the hallmark of the Keynesian developmental state period in Japanese political economy running roughly from the end of the occupation until the late 1980s—had been definitively defeated in the neoliberal era that I chronicled in *Collateral Knowledge* (2011a). But my interlocutors' focus on total surveillance now also suggested a loss of faith in Hayekian competition and price as objective sources of information. Both an earlier generation of Keynesians and a more recent generation of Hayekians had held to ideologies that translated into a kind of actionable hope—for the market-state system as a totality and for the professional caught in that system. In contrast, this was a moment in which hope for the market–state relation and hope for oneself as either a regulator or a market transactor in that sense had been lost. Manic surveillance is a strategy of desperation, born out of a lack of faith in one's theories and policies or, rather, out of having to accept that one's actions do not conform to one's theories of how one should act. Shouganai.

What is ultimately most salient about "too big to fail" then is that the very recognition of the practical reality of the obligation on the part of the state to save private entities from failure plunges the expert into a kind of ideological anomie. The "too big to fail" problem forces regulators and market participants who had steadfastly believed in the Hayekian vision of the preferability of the market as a mechanism for coordinating risk to accept that states—their funds and regulation—are integral to markets, and hence that the fates of states and markets are entirely intertwined (Issing 2012). This is a complicated, even intellectually corrupting, thing to accept: the necessity for state agents to act in a way that is indefensible according to their own ideological commitments (Morita 2012). And yet for my interlocutors, as for U.S. free marketeers running the Federal Reserve in 2008 when they were also forced to violate their own free market principles to bail out the financial institutions, an expert was a person who had suffered this loss of faith in one's theory and by extension a loss of moral high ground about the justifiability of one's own actions and yet was willing to live with this practical cynicism. "There are no atheists in foxholes and no ideologues in financial crises," Ben Bernanke told his staff in the midst of the U.S. financial bailout (Baker 2008). The ideological purists on the left and the right—from the Occupy Wall Street to End the Fed movements—were not grown up enough to face the facts.

Ironically, it is this cynical expertise that now seems to have such an avid appetite for culture. How should we understand this? Fieldwork conversations with lawyers, legal theorists, and regulators as well as extensive analyses of legal and economic texts in which "culture" is referenced (Riles 2004, 2006a) have taught me that it is an ethnographic error to assume that the term *culture* indexes anything that anthropologists might wish to claim as the province of their own expertise. Technocracy presumes a certain degree of faith in rational actors—in an economistic view of the world—because if actors are not rational they will not respond to the carrots or sticks technocrats offer them. However, almost everyone acknowledges that the rational possessory individual model cannot explain everything. Hence, culture functions as a placeholder for what is not knowable within the dominant paradigm (Riles 2013): it simply stands for anything and everything that cannot be explained within the dominant rational actor paradigm as well as any and every possible method exploring such phenomena.[7] This is an essentially negative gap filling view of culture. That is, culture is necessary, but it is also always ultimately subordinate to economic analysis.[8] The desire for culture at the current moment then operationalizes a folk division between culture and economy, or culture and rationality, that antedates anthropology (Davydd Greenwood, personal communication, March 7, 2013). When regulators or market participants indicate an interest in culture, then, they are simply pausing to recognize, provisionally, the gaps in their analyses. What makes this confusing and tempting for the professional anthropologist is the overlap in terminology and mission. Anthropologists, too, talk about culture and consider themselves experts on and even professional stand-ins for the Other.

Rather than take up the call to "fill in the gaps in the form" (Riles 2001) with debt and culture, then, I wonder if we might instead come to ethnographic terms with what has happened to risk expertise and to risk experts themselves. To do so, however, will require incorporating into our account the newfound but equally powerful desire on the part of many anthropologists and cultural critics to be part of the action—to collaborate with financial experts around the cultural turn. Let me explain what I mean with reference once again to the situation after Fukushima.

CITIZEN COLLABORATION

As I mentioned, my office was pitch black, but so was my home: in the spring of 2011, as the government experts proved incapable of shutting Fukushima down, the only positive policy proposal was energy conservation. At this moment of political crisis, citizens were entreated to act collaboratively rather than point fingers (Sakai 2011). Private companies were forced and individuals were admonished to conserve at least 15 percent of their prior power usage by turning off televisions and computers, raising the thermostat, and using the stairs rather than the elevator. We threw ourselves into this project with a tragic energy, as if it was all we could do. Each morning, the *Asahi* newspaper's website published statistics about conservation numbers, and, sure enough, the people conserved enough to make up for the lost power source. Activist groups began talking about the magical 30 percent—the amount of conservation we would need to achieve to shut down nuclear power altogether. But in this somewhat hopeful project, we citizens were also enlisted as collaborators, made responsible for the government's longstanding task of energizing the economy (without, of course, truly having any say over what that energy policy might become).

The same was true of the question of defining the risks. Each morning, the government released a deluge of data about sievert counts of radiation—here and there, taken in this and that system of radiation counting, taken by different government authorities who reported vastly different numbers. The data were dumped on us on government websites, in huge spreadsheets without analysis or interpretation: here are "the facts"; you decide. Like many others, I found myself thrown down a rabbit hole of statistical interpretation, Internet searches, and academic research in my attempt to answer the simple question of whether it was safe for my son to go to school that day. The answer was always the same: Who knows? And yet, like others, I could not curb the compulsion to obtain and attempt to analyze the facts (Morita et al. in press; Petryna 2002). This was not citizen science (Jasanoff 2007) but the enrollment of the citizenry in state disinformation through the flip side of data politics as surveillance—data politics as transparency.

Now, one might say that after almost two decades of engagement with science studies, I should have known better than to waste my sanity on a question as preposterous as "is it safe?" And, indeed, I was aware at the moment of all the ways in which the very project of this question was nothing but a sociotechnical network rigged with glitches at every turn (Riles 2011a). Yet my faith in my own theoretical apparatus was not strong enough, nor did it offer me enough in the way of alternative techniques, to counter the urge for a scientific answer. This is ethnographically significant: at the moment at which anthropological expertise is called into collaboration, that expertise also failed this expert. At the same time, other aspects of our tool kit—including, in particular, critical studies of expert knowledge as a modality of governmentality—seem to have been exceeded by phenomena such as data politics. With the collapse of risk experts' tools—the recognition by all that experts fail—we critics also find that our tools for critiquing risk expertise become somewhat beside the point. And for me, the most potent of all was my loss of my most treasured expert tool, my ability to see the condition ethnographically. I became angry more than curious. I could see only the thing in front of me, not the shape created by the gaps in the form (Riles 2001). This was my analog to their loss of risk expertise.

In such a condition, to plow ahead with the collaboration, heeding the call to fill out the gaps in the economic models with culture, or debt, would have been absurd. It would have been my own no-crisis moment, my own expert cynicism, trundling on without acknowledging how the tools that enabled such a perspective were already displaced and undone.

THE COLLABORATIVE ECONOMY

From transnational anime studios (Condry 2012) to crowdsourcing, collaboration—working with the Other—is the post–financial crisis platform (Allal-Chérif and Maira 2011:865), the new institutional and intellectual idiom, for activity once coordinated through the market. The so-called "collaborative economy" is one that is "more about the use of something than the ownership of it" (Chase 2012; see also Botsman and Rogers 2010): consumers share cars rather than own them outright, for example. But it is not just a consumptive phenomenon; it is also about a different way of imagining production, from mobile phone apps in which people share restaurant reviews or gas prices to peer-to-peer lending, to artwork that is coproduced by strangers with different forms of expertise. "Collaboration" is also the paradigm of the moment in management studies, where it was introduced a decade ago as an alternative to command-and-control organizational approaches in global supply chains, e-commerce, and Internet-based team collaboration (e.g., Basu 2001; Hansen and Nohria 2004; Mahoney 2001). As a cheerful article in the *Japan Times* puts it:

> The more people are participating, and the more diverse their areas of expertise, the better this model will work. And because there's so much diversity and openness, the collaborative economy is all about flexibility and experimentation, and, as a result, adaptation and evolution. What we're finding everywhere is that people have a real desire and ability to participate in the economy as producers—and not just consumers—of goods, and are providing products and services among and between themselves. [Chase 2012]

A desire to participate as producers. What the collaborative economy captures is the enrollment of market participants in data politics, under conditions in which the state is as deflated, as weak, as the neoliberal state, despite its newfound ubiquity.

The paradigm of neoclassical economic theory was not collaboration but coordination. The market itself was imagined as a tool of human coordination, as were key institutional and conceptual building blocks of the market such as the institution of price, on the one hand, and the concept of private property rights, on the other hand. Debates among successive generations and political camps of economists were premised on this shared commitment to the analysis of the problems and potentialities of coordination.[9]

It is this coordinated economy, and its associated intellectual projects, that has slowly eroded to the point of collapse. Coordination as an institutional project has been replaced by governance through data politics and the enrollment of the citizenry in data collection and autointerpretation—a kind of merger of the institutional and descriptive dimensions of markets. Here, data about markets become a matter of a different order, become constitutive of markets in a more immediate way.

When institutions collapse into representations—planning into data politics—then collaborative thinking becomes constitutive and constitutional; it becomes the platform (Benkler 2006; Thrift 2006). It is, in other words, the "alternative" that market professionals so desperately seek from anthropology and the humanities at this moment, precisely because one cannot collaborate with others who are just like oneself; the aesthetic turns on some sort of difference (difference of expertise, difference of culture, strangerhood, etc.; e.g., Bauwens 2005). Collaboration eclipses community, market, institution: it becomes its own politics—albeit one that is merely a format, a platform—no more stable, no more foundational, than that.

Scholarly paradigms—from early anthropological theories of the gift (Mauss 2000) to debates about the relative merits of formalist (Cook 1966; Schneider 1975) and substantivist (Dalton 1961; Polanyi 1944) approaches to the economy, to the discovery of networked sociality (Barnes 1968; Blok 1973; Mitchell 1973; Scott 1991)—are, in both their form and their theoretical substance, reflections of the markets from which they emerge; hence, it should be no surprise that the collaborative economy is already impacting the anthropology of expertise. Chris Kelty, for example, has mounted a sophisticated multidisciplinary collaborative apparatus modeled on the Linux software production model, with the organizing methodological challenge "of dealing with huge volumes of information—not only as a consumer of information, but as a producer as well" (2009:187) and with the specific intent of producing scholarship that, like Linux, would integrate the creativity of the intellectual crowd into something far greater than the sum of its parts. Paul Rabinow likewise has recently written a book-length account of his own failed collaborations—with scientists in the ethnographic venture and with students in the pedagogical one (Rabinow 2011). Where Kelty borrows his method from his subject matter—big data—Rabinow understood his collaborative role vis-à-vis scientists as supplying a set of ideas, a critical perspective on science.

Such projects literalize a set of longstanding methodological commitments in the discipline. As George Marcus writes:

> Collaborations have always been integral to the pursuit of individual fieldwork projects. . . . They never have been, however, an explicit aspect or norm of anthropology's culture of metamethod. The fieldworker, for example, is not held accountable or judged by the quality of his collaborations and his ability to manage them. Yet, today, collaborations of various kinds are increasingly both the medium and objects of fieldwork. [Marcus 2009:29]

Indeed, the theoretical foundation for this work predates the collaborative economy to the theorization of culture itself as the dialogical invention of subject and object (Field 2010; Strathern 1988; Tedlock and Mannheim 1995; Wagner 1975). If "culture" is understood in Wagner's terms as the "field"—the intellectual premise for research—and also as dialogical effect of anthropologists' collaboration with their interlocutors, then, in retrospect, it has always been collaboration—the transformation of social relations into analytical relations (Strathern 1995)—not culture, or theories of debt, that is our great disciplinary contribution.[10]

One of the hallmarks of much collaborative anthropology seems to be that the traditional aesthetics of anthropological expertise—the division between the sphere of data collection and the sphere of theorization—have been productively eclipsed by other approaches to theorization. Joanne Rappaport speaks of "collaboration as a space for the co-production of theory" (2008:2). As she explains,

> I purposefully emphasize this process as one of theory building and not simply coanalysis in order to highlight the fact that such an operation involves the creation of abstract forms of thought similar in nature and intent to the theories created by anthropologists, although they partially originate in other traditions and in

> nonacademic contexts. Understood in this sense, collaboration converts the space of fieldwork from one of data collection to one of co-conceptualization. [Rappaport 2008:5]

Kelty frames the same condition in terms of a challenge for research:

> In the age of inter-, trans-, multi-, and anti-disciplinary critique and innovation, however, the question is raised anew: If not by discipline, then how does one identify a significant problem, how does one become satisfied with the appropriate methods of research to pursue such problems, indeed, how does one determine to whom one is speaking about these problems and for what purpose, in the absence of strong disciplinary signals? [Kelty 2009:189]

And yet there always remains a need for "disciplinary distinctiveness" (Reddy 2008:58): ethnographic response begins with an appreciation of the ways in which ethnographers and their collaborators are not the same kinds of thinkers and actors; the beginning points and ending points of their shared knowledge are not the same (Riles 2006a). Rappaport gives the prescient example of discourses of culture among the indigenous activists with whom she collaborated. She points out that the confusion lies in our assumption that their expert term, *culture,* is the same as our own expert term of the same name:

> This is not a strategic deployment of essentializing discourses to describe what exists "out there" but a model of what "should be," a blueprint for the future. As a result, indigenous activists' deployments of culture cannot be equated with ethnography. Their purpose is different. While ethnographers engage in cultural description with an eye to analyzing it, indigenous autoethnographers study culture to act upon it. [Rappaport 2008:21]

The anthropological collaboration differs in one other important sense from the collaborations of the new platforms: anthropological collaboration can never be straightforwardly instrumental. By definition, in ethnography, one does not quite know what one is looking for—or, rather, one is open to letting the questions emerge from the intersubjective encounter. The only goals of the ethnographer are more provisional: mastering the indigenous discourse enough to get by, enrolling necessary local and global allies in the research project (Reddy 2008), or "finding the truth" about a particular episode in local history, for example. These are "as if" goals because they are both actual goals and impossibilities (there is no singular truth; it is impossible to master the indigenous discourse), yet as such they stand in the place of, and hence obviate the need for, actual instrumentalism. Is there anything that anthropologists might contribute, from this vantage point, to the current moment, of big data and the collaborative economy?

Immediately after the earthquake and environmental crisis, a group of anthropologists, legal scholars, and economists, together with practicing lawyers, bureaucrats, and financial analysts in Japan, the United States, and around the Pacific Rim, initially in face-to-face, telephone, or e-mail contact, began to think about this aspect of the evolving transnational crisis: the lack of understanding; the points of disconnect and miscommunication, of distrust and duplicity; and the crisis of faith in each genre of expertise. We experienced the environmental crisis and its international consequences as a tragic confirmation that the tools of intellectuals and practitioners alike—and hence the intellectual and technical conversations across the Pacific and across our disciplines—had long been far thinner and less substantive than necessary to the current moment. But above all, we experienced the crisis as existential—as the profound shaking of our own sense of intellectual, political, and ethical direction. One person spoke, only half-jokingly, of drinking himself to death. Another stopped speaking almost altogether. The available avenues for intervention—from volunteering in the clean-up effort at tsunami-affected sites to providing expert opinion to government ministries—each seemed inadequate responses to our crisis.

We began holding online discussions under the name Meridian 180 on a range of topics from whether the consumption tax should be raised to the meaning of happiness, and eventually we built a closed, online platform where participants could write in their own languages and have their text translated within a short period of time by postdoctoral fellows. What distinguished the collaboration from most networks, virtual communities, deliberative experiments, or political pressure groups, many of which are also cross-disciplinary or transnational, is that we began from the standpoint of our sense of loss of any sense of the proper questions to be deliberated: we were not collaborating toward some common goal, to which each could contribute their respective expertise. We were simply living, side by side, this moment of our loss of expertise and, with it, our perspective on where we might be going.

It was a curious project. Its aim was certainly not some liberal idea of overcoming barriers to common understanding through dialogue; members shared no such liberal faith in the power of language or deliberation. It did not emulate the methods of another field, as does Kelty's collaborative project; the method and discursive frame remained firmly if implicitly anthropological—"ethnographic response" (Riles 2006b). Nor was it a critical project, a tactical intervention in the political moment; members shared no common understanding of what the aims or goals of political intervention might be. The project also differed from paraethnography: just as there was no agreement about the political goals, there was no shared conception of what we might want to describe or make sense of through the pooling of our expertise. Two years later, the project now counts more than 500 members and includes a range of disparate, disconnected "projects" of various orders and genres, from a multilingual book series to a project to build a common currency for Asia. But its wider goals and objectives remain as unformed as ever. At a recent meeting, members pondered the question of what metaphors to use to understand ourselves. Possibilities that were proposed included "amateur think tank," "guerrilla consulting group," "black box theater performance," and "intellectual gym" in which people could just get some intellectual training, side by side, with other strangers doing the same. Yet what was different about our project was the abandonment of any explicit aim of producing knowledge—comparison, criticism, data, and so forth. What we wanted to produce, rather, was in an immediate sense a personal basis for survival after the loss of our tools and the confusion of our politics. We wanted some way to exist alongside others. For many of our group, it became simply a reason to get through the day. Yet I believe it achieved this because it held the ends of collaboration in abeyance long enough to allow us to appreciate the means—to revisit each of our expert tools by redeploying them, against and alongside those belonging to others, after professional expertise ceased to deliver a sufficient space of legitimation.

In retrospect, we can say that our collaboration retooled anthropological technique in response to the collaborative turn in market relations (Riles et al. n.d.). Recognizing the paraethnographic condition and the rise of the collaborative economy as opportunities as well as political constraints, it brought the moment of ethnographic observation and co-creation into the moment of technocratic-expert participation while remaining firmly grounded in the kind of responsiveness that is the anthropological hallmark. For the anthropologists among us, the collaboration constitutes a field (what was once the taken-for-granted object of study). For the financiers and regulators, analogously, it constitutes an alternative to the market (what was once the taken-for-granted object of professional work). Our expertise was reinvigorated by our willingness to play as amateurs—as those who, like amateur musicians, historians, or literary critics, do not lay claim to an instrumental purpose for their work (no matter how skilled or dedicated they may be).[11] If critique and anthropological comparison served as modalities of intellectual response to the coordinated economy, I wonder if ethnographically inspired amateurism may serve as a new politics of expertise in the era of market collaboration.

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NOTES

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1. This temporality was the precise opposite of the future-oriented modality of expert "preparedness" described by Andrew Lakoff (2007).
2. We might distinguish three general periods in market–state relations then: (1) the period of the developmental state, characterized by widespread faith in technocratic planning (the state-coordinated capitalism of Japan Inc.); (2) the neoliberal reform period, characterized by a rejection of the very possibility of planning, in which regulators substituted a faith in price and private law rules as coordination tools; and now, (3) a period in which all regulatory strategies fail to generate commitment and hope—a moment of shouganai.
3. Janet Roitman has cautioned critics of capitalism to refrain from unthinkingly falling prey to the market's own language of crisis. Drawing on her own research in Chad for whom what outsiders might describe as financial crisis is endemic and unending, she points out that the notion of crisis is parasitic on some vision of an alternative condition of stasis and, hence, is always framed as the temporary state of exception (Roitman 2011). While I share Roitman's concern that critical thought not reproduce the unwritten parameters of capitalism, I also want to remain open to the possibility that both the experience of crisis, and the experience of the lack thereof, may be more polyvocal than capitalist logic presumes. As described below, for the experts with whom I worked, the very ability to see crisis depended on certain expert tools—tools whose failure engendered potentialities of another order.
4. I do not identify dates of interviews in order to protect the identities of my interlocutors.
5. As Beck argues, nuclear accidents cancel the insurance principle, whereby risks are rendered calculable, because although the very possibility of the risk of a nuclear accident is produced by the calculating mentality; the risk-caused accident itself, once it has occurred, is beyond calculability (Beck 2009:27–28).
6. "As computing becomes exponentially more powerful, it will also enable more natural interactions with scientists. Systems that are able to 'understand' and have far greater contextual awareness will provide a level of proactive assistance that was previously available only from human helpers" (Mundie 2009:224). I thank Niranjan Sivakumar for bringing the fourth paradigm to my attention.
7. In this respect, culture works here much like gender works in UN practices and poses problems for anthropology similar

to those UN gender analysis poses for feminist theory (Riles 2006a).

8. I have written elsewhere (Riles 2004) about how this notion of culture bolsters the neoliberal project, and one can see it doing the same here, biding time until a new market fundamentalism can reemerge.
9. These debates revolved around which institution—formal legal rules such as property rights (Hayek) or technocratic planning (Keynes)—was the best institutional solution to coordination problems.
10. As Deepa Reddy writes of her government-sponsored research on local perspectives on genetic variation research,

> Collaboration in this context is both enabling and limiting, I suggest, but is nevertheless the overriding means by which a heavily deterritorialized and disjointed field is paradoxically given a (rhizomic) coherence of a kind, and new objects of ethnographic study acquire definition. [Reddy 2008:52]

11. Anna Grimshaw and Keith Hart, responding to Edward Said's critique of narrow professionalism in academic thought, propose that anthropologists rediscover anthropology's relationship to amateurism:

> It might be said that, compared with the other sciences and humanities, anthropology has remained in important ways an anti-discipline, taking its ideas from anywhere, striving for the whole, constantly reinventing procedures on the move. Thus, as the boundaries defining specialist disciplines give way, anthropology contains within itself many elements of a more flexible, constructive approach to learning about the world. These are its strength and creative source. [Grimshaw and Hart 1994:259]

One unlikely model, they argue, is W. H. R. Rivers, whose project

> required the development of new methods; and the essence of his practice was a spirit of openness. But, just as important, the example of Rivers reveals the potentially creative connection between individuality and community, for he saw that pursuit of his own eclectic interests entailed working for a collective scientific project. Rivers, in short, unified within his intellectual personality both the professional and the amateur. [Grimshaw and Hart 1994:257–258]

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